

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

Claim 1 (Currently Amended): A white balance correcting device for correcting white balance of a picked-up image signals, comprising:

an image pickup device which picks-up image signals;

peak value acquiring part which acquires a peak value of brightness and color signal values corresponding to the peak value of brightness obtained in a predetermined region of the image signals by said image pickup device;

mean average value calculating part which calculates a mean ~~an~~ average value of brightness and mean average values of color signals from video signals signal values obtained in each of a plurality of blocks of an image pickup-up plane a predetermined region of the image signals by said image pick-up device;

peak value acquiring part which acquires a peak value of brightness and peak values of color signals from video signals obtained in each of the plurality of blocks;

comparison part which makes comparison between brightness information of the mean average value and the peak value;

selection part which selects either of the mean values of the color signals obtained by said mean average value calculating part or the peak values of color signals obtained by said peak value acquiring part according to comparison result by said comparison part; and

white balance control part which controls white balance on the basis of the values selected by said selection part.

Claim 2 (Currently Amended): A white balance correcting device according to claim 1, wherein said comparison part computes comparison between a first integral value obtained by integrating ~~mean~~ average values of ~~video signals~~ obtained in the ~~plurality of~~ blocks by said ~~mean~~ average value calculating part and a second integral value obtained by integrating peak values of ~~video signals~~ obtained in the ~~plurality of blocks~~ predetermined region by said peak value acquiring part, and, wherein said selection part selects the values obtained by said peak value acquiring part if the second integral value is not less than a predetermined number of times the first integral value, and said selection part selects the value obtained by said ~~peak value acquiring~~ average value calculating part, ~~and, if the second integral value is less than the predetermined number of times the first integral value, said selection part selects the value obtained by said mean value calculating part.~~

Claim 3 (Currently Amended): A white balance correcting device according to claim 2, further comprising:

white determining part which determines whether the average value of color signal values calculated by said ~~mean~~ average value calculating part and the color signal values corresponding to the peak value of brightness acquired by said peak value acquiring part exist within a white range,

wherein said comparison part integrates ~~only~~ values which have been determined ~~by said white determining part~~ to exist within the white range by said white determining part, in order to obtain the first integral value and the second integral value.

Claim 4 (Currently Amended): A white balance correcting device according to claim 1, wherein said peak value acquiring part acquires peak values of ~~video~~ image signals from signals that have beforehand been subjected to limitation for setting an upper limit to a signal level of ~~an inputted video signal~~ the image signals picked-up by said image pick-up device.

Claim 5 (Currently Amended): A white balance correcting device according to claim 1, wherein said peak value acquiring part acquires the peak values ~~value of video~~ signals from signals that have beforehand been subjected by a low-pass filter to limitation for setting an upper limit to a signal level of ~~an inputted video signal~~ the image signals picked-up by said image pick-up device.

Claim 6 (Currently Amended): A white balance correcting device for correcting white balance of a picked-up image signal, comprising:

inputting part which inputs picked-up image signal;

peak value acquiring part which acquires a peak value of brightness and color signal values corresponding to the peak value of brightness obtained in a predetermined region of the image signals inputted by said inputting part;

mean average value calculating part which calculates a ~~mean~~ an average value of ~~inputted video signals~~ brightness and average values of color signal values obtained in a predetermined region of the image signals inputted by said inputting part;

peak value acquiring part which acquires a peak value of the inputted video signals;

comparison part which makes comparison between brightness information of the ~~mean~~ average value and the peak value;

selection part which selects either of ~~mean-color~~ the values obtained by said ~~mean average~~ value calculating part or ~~peak-color~~ the values obtained by said peak value acquiring part according to the comparison result by said comparison part; and

white balance control part which controls white balance on the basis of the values selected by said selection part.

Claim 7 (Currently Amended): A white balance correcting device according to claim 6, wherein said selection part selects the values ~~comparison part computes comparison between a mean value of video signals obtained by said mean value calculating part and a peak value of video signals obtained by said peak value acquiring part; and~~, if the peak value is not less than a predetermined number of times the mean average value, and said selection part selects the ~~peak-value~~ values obtained by said average value calculating part, and, if the peak value is less than the predetermined number of times the mean average value, ~~said selection part selects the mean value.~~

Claim 8 (Currently Amended): A white balance correcting method for correcting white balance of a picked-up image signals, comprising:

picking-up image signals;

acquiring a peak value of brightness and color signal values corresponding to the peak value from the image signals obtained in a predetermined region of the image signals picked-up in said picking-up step;

dividing an image picking-up plane into a plurality of blocks;

calculating a-mean an average value of brightness and mean average values of color ~~signals from video signals~~ signal values from the image signals obtained in each of the

~~plurality of blocks~~ a predetermined region of the image signals picked-up in said picking-up step;

~~acquiring a peak value of brightness and peak values of color signals from video signals obtained in each of the plurality of blocks;~~

making comparison between brightness information of the ~~mean~~ average value and the peak value;

selecting either of the ~~mean~~ values of ~~color signals~~ obtained by in said ~~mean~~ average value calculating step or the ~~peak~~ values of ~~color signals~~ obtained by in said peak value acquiring step according to comparison result; and

controlling white balance on a basis of the values selected by in said selection step.

Claim 9 (Currently Amended): A white balance correcting method according to claim 8,

wherein, in making comparison, computing a ratio between first integral value obtained by integrating ~~mean~~ average values of ~~video signals~~ obtained in the ~~plurality of blocks~~ by said ~~mean~~ average value calculating step and a second integral value obtained by integrating peak values of ~~video signals~~ obtained in the ~~plurality of blocks~~ by said peak value acquiring step,

wherein, ~~the values if the second integral value is not less than a predetermined number of times the first integral value, the value obtained by~~ in said peak value acquiring step is selected by said selection, ~~and, if the second integral value is not less than the a~~ predetermined number of times the first integral value, ~~and the value~~ values obtained by in

said ~~mean~~ average value calculating step is selected by said selection if the second integral value is less than the predetermined number of times the first integral value.

Claim 10 (Currently Amended): A white balance correcting method according to claim 9, further comprising:

determining whether the average value of color signal values calculated ~~by~~ in said ~~mean~~ color average value calculating step and the color signal values corresponding to the peak value values acquired ~~by~~ in said peak value acquiring step exist within a white range,

wherein ~~only~~ values which have been determined ~~by~~ to exist within the white range in said white determining step ~~to exist within the white range~~ are integrated ~~by~~ said selection to obtain the first integral value and the second integral value.

Claim 11 (Currently Amended): A white balance correcting method according to claim 8, wherein peak values of ~~video~~ the image signals are acquired ~~by~~ in said peak value acquiring step from signals that have beforehand been subjected to limitation for setting an upper limit to a signal level of ~~an inputted video signal~~ the image signals picked-up in said image picking-up step.

Claim 12 (Currently Amended): A white balance correcting method according to claim 8, wherein peak values of ~~video~~ the image signals are acquired ~~by~~ in said peak value acquiring step from signals that have beforehand been subjected by a low-pass filter to limitation for setting an upper limit to a signal level of ~~an inputted video signal~~ the image signals picked-up in said image picking-up step.

Claim 13 (Currently Amended): A white balance correcting method for correcting white balance of a picked-up image, comprising:

inputting a picked-up image signals;

acquiring peak value of brightness and color signal values corresponding to the peak value obtained in a predetermined region of the image signals inputted in said inputting step;

calculating mean values of inputted video signals an average value of brightness and average values of color signal values obtained in a predetermined region of the image signals inputted in said inputting step;

acquiring peak values of the inputted video signals;

making comparison between information of the mean average value and the peak value;

selecting either of the values obtained by in said mean average value calculating step or the values obtained by in said peak value acquiring step according to comparison result; and

controlling white balance on the basis of the values selected by said selection.

Claim 14 (Currently Amended): A white balance correcting method according to claim 13,

wherein, the values obtained in acquiring a peak value step is selected by said selection if the peak value is not less than a predetermined number of times the mean average value in making comparison, and the peak value obtained in calculating an average value step is selected by said selection, ~~and~~, if the peak value is less than the predetermined number of times the mean average value in making comparison, ~~the mean value is selected by said selection.~~

Claim 15 (Currently Amended): A storage medium which stores therein a program for executing a process for correcting white balance of a picked-up image signals, said process comprising:

picking-up image signals;

acquiring a peak value of brightness and color signal values corresponding to the peak value from the image signals obtained in a predetermined region of the image signals picked-up in said picking-up step;

dividing an image picking-up plane into a plurality of blocks;

calculating mean values of video signals obtained in each of the plurality of blocks an average value of brightness and average values of color signal values from the image signals obtained in a predetermined region of the image signals picked-up in said picking-up step;

acquiring peak values of video signals obtained in each of the plurality of blocks;

making comparison between brightness information of the mean average value and the peak value;

selecting either of the mean values of obtained in said average value calculating step or the peak values obtained in said peak value acquiring step according to comparison result; and

controlling white balance on the a basis of the selected values of the mean values and the peak values selected in said selection step.

Claim 16 (Currently Amended): A storage medium according to claim 15,

wherein, in making comparison, computing a ratio between first integral value obtained by integrating average values obtained in said average value calculating step and a second integral value obtained by integrating peak values obtained in said peak value acquiring step,

wherein, the values obtained in said peak value acquiring step is selected by said selection if the second integral value is not less than a predetermined number of times the first integral ~~in making comparison, the acquired peak value is selected,~~ and the values obtained in said average value calculating step is selected by said selection; if the second integral value is less than the predetermined number of times the first integral value ~~in making comparison, the calculated mean value is selected.~~

Claim 17 (Currently Amended): A storage medium according to claim 16, wherein said process further comprises:

determining whether ~~calculated mean values and acquired peak values~~ the average value of color signal values calculated in said color average value calculating step and the color signal values corresponding to the peak value acquired in said peak value acquiring step exist within a white range;

wherein ~~only~~ values which have been determined to exist within the white range in said white determining step are integrated to obtain the first integral value and the second integral value.

Claim 18 (Currently Amended): A storage medium according to claim 15, wherein peak values of video ~~the image~~ signals are acquired in said peak value acquiring step from signals that have beforehand been subjected to limitation for setting an upper limit to a

signal level of ~~an inputted video signal~~ the image signals picked-up in said image picking-up step.

Claim 19 (Currently Amended): A storage medium according to claim 15, wherein peak values of ~~video~~ the image signals are acquired in said peak value acquiring step from signals that have beforehand been subjected by a low-pass filter to limitation for setting an upper limit to a signal level of the image signals picked-up in said image picking-up step ~~an inputted video signal~~.

Claim 20 (Currently Amended): A storage medium which stores therein a program for executing a process for correcting white balance of a picked-up image signals, said process comprising:

inputting part which inputs picked-up image signal;

peak value acquiring part which acquires a peak value of brightness and color signal values corresponding to the peak value of brightness obtained in a predetermined region of the image signals inputted by said inputting part;

average value calculating part which calculates an average value of brightness and average values of color signal values obtained in a predetermined region of the image signals inputted by said inputting part ~~mean values of inputted video signals;~~

~~acquiring peak values of the inputted video signals;~~

making comparison part which makes a comparison between brightness information of the ~~mean~~ average value and the peak value;

selecting selection part which selects either of the ~~mean~~ values obtained by said average value calculating part or the values obtained by said ~~and the peak values~~

~~according to comparison result~~ value acquiring part according to the comparison result by said comparison part; and

~~controlling~~ white balance control part which controls white balance on the basis of the ~~selected~~ values selected by said ~~selecting~~ selection part.

Claim 21 (Currently Amended): A storage medium according to claim 20,

wherein, said selection part selects the values obtained by said peak value acquiring part if the peak value is not less than a predetermined number of times the ~~mean average value in making comparison~~, the acquired peak value is selected, and, said selection part selects the values obtained by said average value calculating part if the peak value is less than the predetermined number of times the ~~mean average value in making comparison~~, the ~~calculated mean value is selected~~.

Claim 22 (Currently Amended): A white balance correcting device for correcting white balance of a picked-up image, comprising:

picking-up image signals of an image pick-up plane;

dividing part which divides the image pickup plane into a plurality of blocks;

~~mean average~~ value calculating part which calculates mean average values of video signals image signals obtained in each of a plurality of blocks of ~~an image pickup plane~~ the image signals picked up in picking-up step;

peak value acquiring part which acquires peak values of video the image signals from all of the plurality of blocks of the image signals picked-up in the picking-up step independently of said peak value acquiring part;

selection part which selects either of the values obtained by said mean average value calculating part or the values by said peak value acquiring part; and

white balance control part which controls white balance on the basis of the value selected by said selection part.